



State Revolving Fund Loan Programs

Drinking Water, Wastewater, Nonpoint Source

ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

**TOWN OF PATRIOT
STATE ROAD 156 WATER MAIN IMPROVEMENTS
SRF PROJECT DW 102 219 01**

DATE: June 20, 2008

DEADLINE FOR SUBMITTAL OF COMMENTS: July 21, 2008

I. INTRODUCTION

The above entity has applied to the Drinking Water State Revolving Loan Fund (SRF) for a loan to finance all or part of the drinking water project described in the accompanying Environmental Assessment (EA). As part of facilities planning requirements, an environmental review has been completed which addresses the project's impacts on the natural and human environment. This review is summarized in the attached EA.

II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The SRF Drinking Water Program has evaluated all pertinent environmental information regarding the proposed project and determined that an Environmental Impact Statement is not necessary. Subject to responses received during the 30-day public comment period, and pursuant to Indiana Code 4-4-11, it is our preliminary finding that the construction and operation of the proposed facilities will result in no significant adverse environmental impact. In the absence of significant comments, the attached EA shall serve as the final environmental document.

III. COMMENTS

All interested parties may comment upon the EA/FNSI. Comments must be received at the address below by the deadline date above. Significant comments may prompt a reevaluation of the preliminary FNSI; if appropriate, a new FNSI will be issued for another 30-day public comment period. A final decision to proceed, or not to proceed, with the proposed project shall be effected by finalizing, or not finalizing, the FNSI as appropriate. Comments regarding this document should be sent within 30 days to:

**Max Henschen
Senior Environmental Manager
State Revolving Fund -- IGCN 1275
100 N. Senate Ave.
Indianapolis, IN 46204
317-232-8623**

ENVIRONMENTAL ASSESSMENT

I. PROJECT INFORMATION

Project Name and Address:

Town of Patriot
P.O. Box 145
Patriot, IN 47038

SRF Loan Number:

DW 102 219 01

Authorized Representative:

Mr. James Caudill
Town Board President

II. PROJECT LOCATION

The Patriot Municipal Water Utility is located in Switzerland County in the southeast corner of Indiana along the Ohio River. Both the existing and 20-year service areas are the same as shown in Figure 1. Moving south to north, the project is located in the Patriot USGS quadrangle, T1N, R1E, sections 5 and 33; the Rising Sun quadrangle, T2N, R1E, sections 33, 31, 29 and 30; and the Rising Sun quadrangle, T3N, R1W, 25, 26, and 27.

III. PROJECT NEED AND PURPOSE

The existing State Road 156 water main is a 1970s-era 4-inch diameter gray plastic pipe, which experiences three to four breaks per month. The frequent line breaks are attributed to the brittle condition of the piping, aggravated by the Hilltop Basic Reserve gravel mine operation in the area, as well as the steep, unstable slopes in the north part of the project area. Because of the structural condition of the water main and to increase pressure to customers in the area, the utility will replace the water main with new 6-inch and 8-inch PVC water main.

IV. PROJECT DESCRIPTION

As shown in Figure 1, the utility will replace 4-inch water main with 8-inch PVC water main for approximately 2000 feet on SR 156 northward from the unincorporated residential community called Land Development. From that point northward on SR 156 to North Branch Road, the utility will replace approximately 28,500 feet of 4-inch water main with 6-inch PVC water main. The town will also install valves, hydrants, air release vaults and other items as shown in Table 1.

V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

A. Table 1: Selected Plan Estimated Cost Summary

Construction Costs				
Based on updated material costs provided by contractor April 15, 2008				
Item	Units	Quantity	Unit Cost	Cost
6-inch PVC Water Main	feet	28,500	9.90	\$282,150
8-inch PVC Water Main	feet	2,000	11.76	\$23,520
8-inch Gate Valves and Box		1	960	\$960
6-inch Gate Valves and Box		6	736.34	\$4,418.04
4-inch Gate Valves and Box		3	523.52	\$1,570.56
Reconnect existing services		30	320	\$9,600
Test Wire	feet	30,500	.28	\$8,540
6-inch Operation & Maintenance hydrant with valve		6	2,779.14	\$16,674.84
2-inch Air Release Valve Vaults		4	731	\$2,924
Test Markers		20	145	\$2,900
Connection to 4 inch Main		3	1,800	\$5,400
Leak Meter		2	909	\$1,818
6- inch Directional Bore	feet	500	51.77	\$25,885
Gravel Drive and Gravel Road Repairs	feet	350	9	\$3,150
6-inch/16-inch Road Bores	feet	250	102	\$25,500
Connection to 8-inch Main		1	2,221	\$2,221
Connection to 4-inch Ductile Iron Main		2	1,789	\$3,578
Asphalt Road and Drive Repair	feet	170	40	\$6,800
Subtotal, Cost Items				\$427,609.44
Construction Contingencies	10%			\$42,761
Subtotal, Construction Cost				\$470,370.44
Non-Construction Costs				
Design and Engineering				\$49,000
Construction Observation				\$25,000
Other Engineering				\$10,000
Subtotal, Engineering Costs				\$84,000
Environmental Studies				\$5,000
Legal and Administrative				\$5,000
Permits and Fees				\$2,000
Subtotal, Other Non-Construction Costs				\$12,000
TOTAL				\$566,370.44

- B. The town closed on a 20-year loan from the Drinking Water State Revolving Loan Fund (SRF) for \$5,989,000 on August 4, 2006 to fund an extensive project of new wells, new lines, new storage tanks, and new and renovated booster stations; that project is substantially complete. Patriot will finance the project described here by using the remaining loan balance, approximately \$639,625 as of June 18, 2008. The town intends to install replacement water line from Land Development northward to North Branch Road or to the point where the SRF funds are expended; in that case, the existing 4-inch water main would remain in use from that point northward.

VI. DESCRIPTION of EVALUATED ALTERNATIVES

A. Alternative 1 – No Action Alternative

The Patriot Municipal Water Utility must make improvements to the system to improve the water main deficiencies and maintain water service to the area, as well as provide capacity for potential growth over the next 20 years. The no-action alternative does not address these issues, and this option was rejected.

B. Alternative 2 – Replace Water Main

The option provides the Patriot water utility with a reliable water main for current and future needs. This is the selected alternative.

VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

A. Direct Impacts of Construction and Operation

Disturbed Land: The new water main will follow the existing water main easement or be within the right-of-way of State Road 156 or within county road rights-of-way crossed by SR 156. All such land has been significantly disturbed by previous construction activity.

Structural Resources (Figure 2): The project will not negatively affect structural resources listed in the Switzerland County Interim Report of Historic Sites and Structures or structures listed in or eligible for inclusion in the National Register of Historic Places. The SRF's finding pursuant to Section 106 of the National Historic Preservation Act is: "no historic properties affected."

Plants/Animals: The construction and operation of the project will not negatively affect state- or federal-listed endangered species or their habitat. The project should not affect trees or brushy areas.

Wetlands (Figure 3): The project will not affect wetlands. Stream crossings will be bored rather than open cut. If the proposed route encroaches on a wetland, the route will be adjusted to avoid the impact.

100-Year Floodplain and Surface Waters (Figures 3 and 4): The proposed water main project will be directionally bored at the two stream crossings (Figure 4); one crossing will be at an unnamed ephemeral stream just west of Gridley Road just west of SR 156, and the other will be at Forty Wink Creek, an ephemeral stream just west of Henderson Road, between Gridley Road and North Branch Road. The water line will cross floodplains associated with the creeks, but will not affect a floodplain.

Groundwater/Drinking Water Supplies: The water main construction is not expected to encounter groundwater or to affect drinking water supplies.

Prime Farmland: The proposed project will not affect prime/unique farmland.

National Natural Landmarks: The project will not affect National Natural Landmarks.

Air Quality: There will be some dust generated during construction of the water main. Measures will be taken to minimize dust initiated by the construction activities.

Open Space and Recreational Opportunities: The project will neither create nor destroy open space or recreational opportunities.

The proposed project will not adversely affect Outstanding State Resource waters, Exceptional Use Streams, or Natural, Scenic and Recreational Rivers and Streams.

B. Indirect Impacts

The town's Preliminary Engineering Report states: *Patriot Water will ensure, through local zoning laws or other means, that future development, as well as future supply, storage, distribution, or treatment works projects connecting to SRF-funded facilities will not adversely impact wetlands, archaeological, historical, or structural resources, or other sensitive environmental resources. Patriot Water will require the water line replacement project to be constructed within the guidelines of the U.S. Fish and Wildlife Service, DNR, IDEM, and other environmental review authorities.*

C. Comments by Environmental Review Authorities

The Natural Resources Conservation Service, in correspondence dated January 4, 2005, noted that the project would directly convert 0.9 acres of prime/unique farmland.

This document serves as the first notice to the State Historic Preservation Officer, the Indiana Department of Natural Resources Environmental Unit and the U. S. Fish and Wildlife Service.

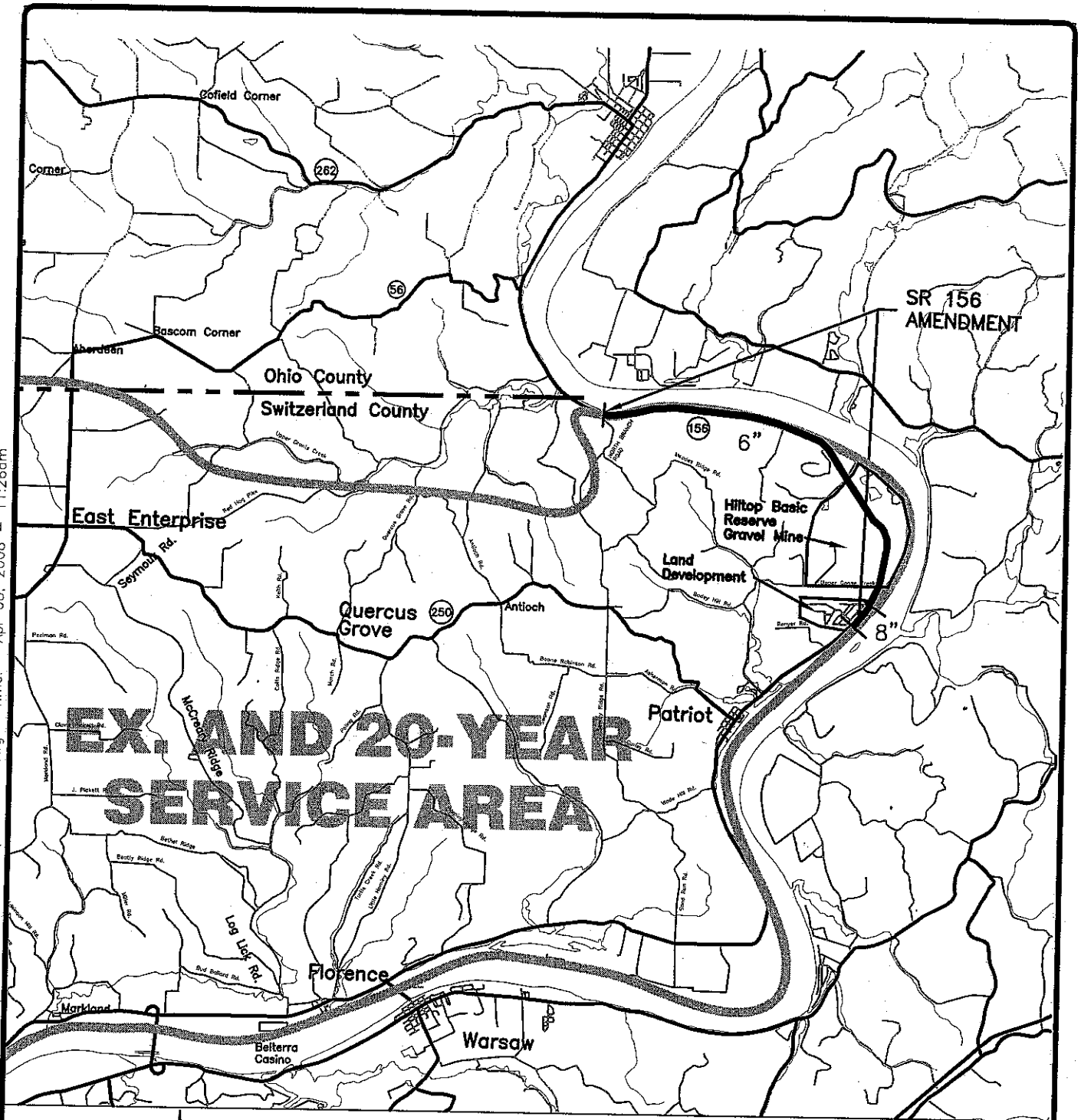
VIII. MITIGATION MEASURES

The town's Preliminary Engineering Report states: *No long-term negative erosion, siltation, air quality, or odor impacts are expected from this project. Short-term erosion and siltation impacts will be controlled and monitored by the contractor during the installation and construction of the water mains.*

IX. PUBLIC PARTICIPATION

A properly noticed Public Hearing was held at 6:00 p.m. on September 18, 2007 in the Patriot Town Hall. No written comments concerning the project were received in the 10-day period following the hearing.

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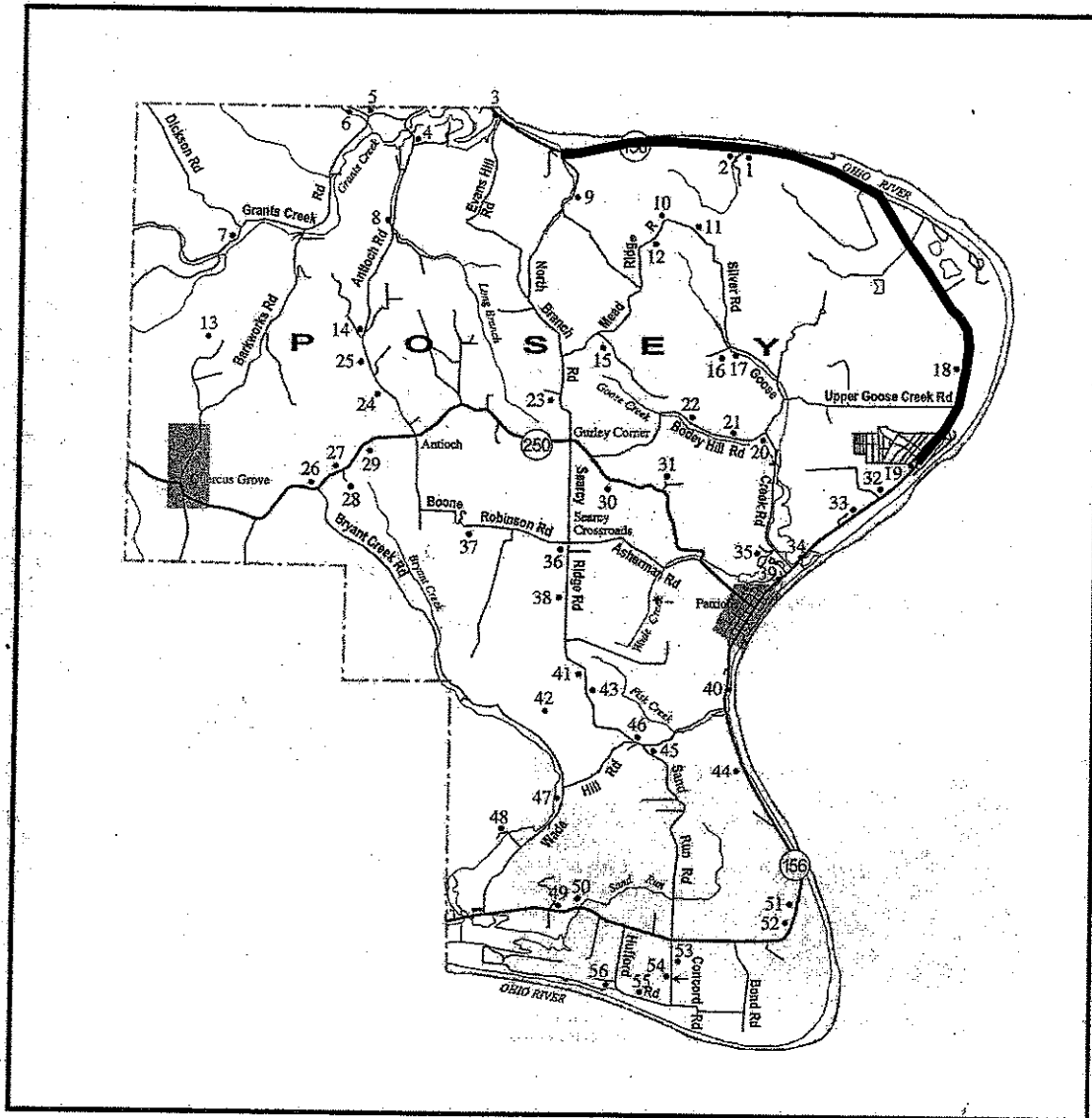
EXISTING AND 20-YEAR SERVICE AREA

PATRIOT MUNICIPAL WATER UTILITY
PRELIMINARY ENGINEERING REPORT - SR 156 AMENDMENT
SWITZERLAND COUNTY, INDIANA



Figure 1

Posey Township (00001-056)



POSEY TOWNSHIP HISTORICAL SITE LOCATION MAP

from Switzerland County Interim Report 2nd Edition, 2006; Indiana
Historic Sites and Structures Inventory

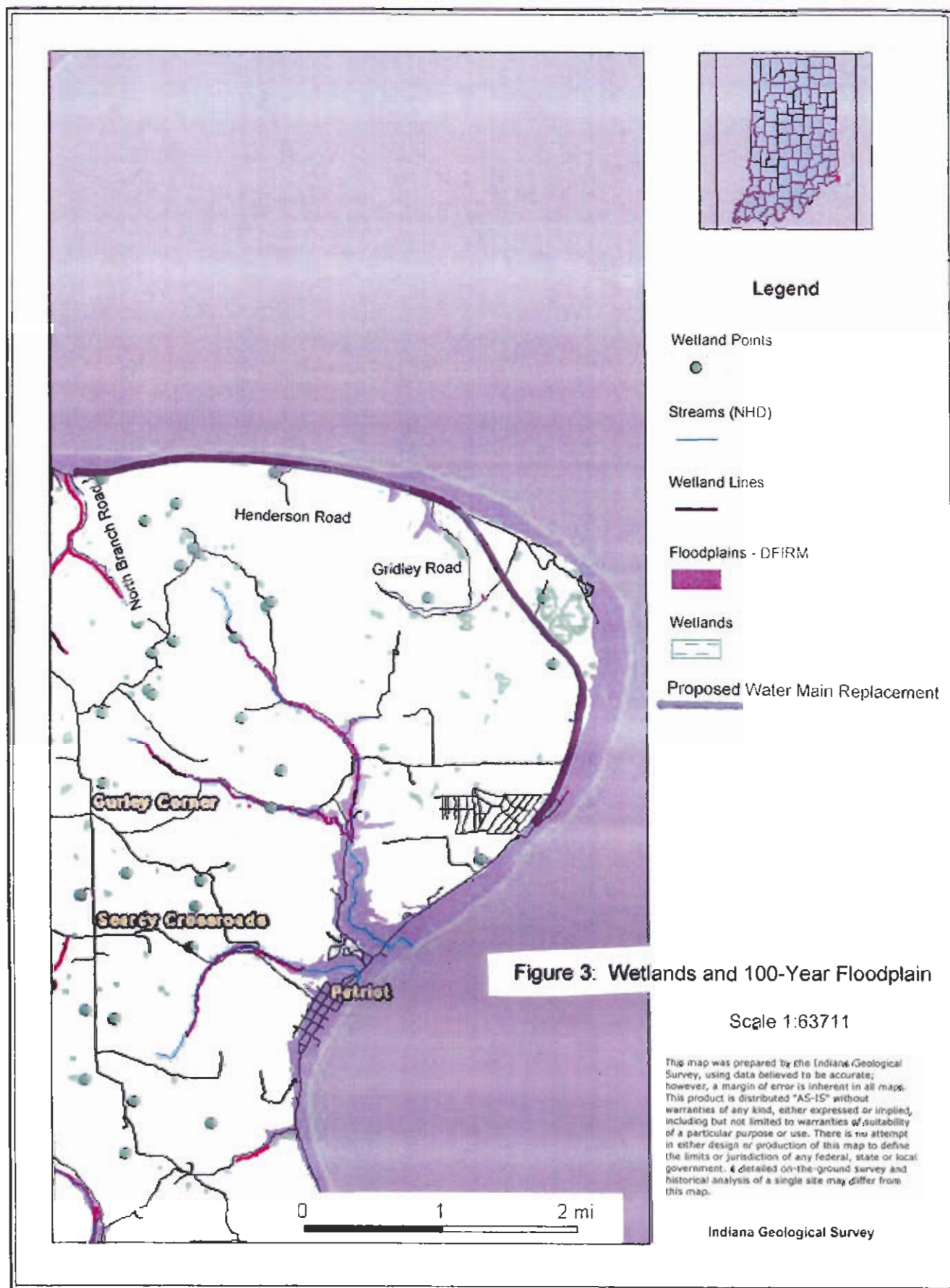
PRELIMINARY ENGINEERING REPORT - SR 156 AMENDMENT

SWITZERLAND COUNTY, INDIANA

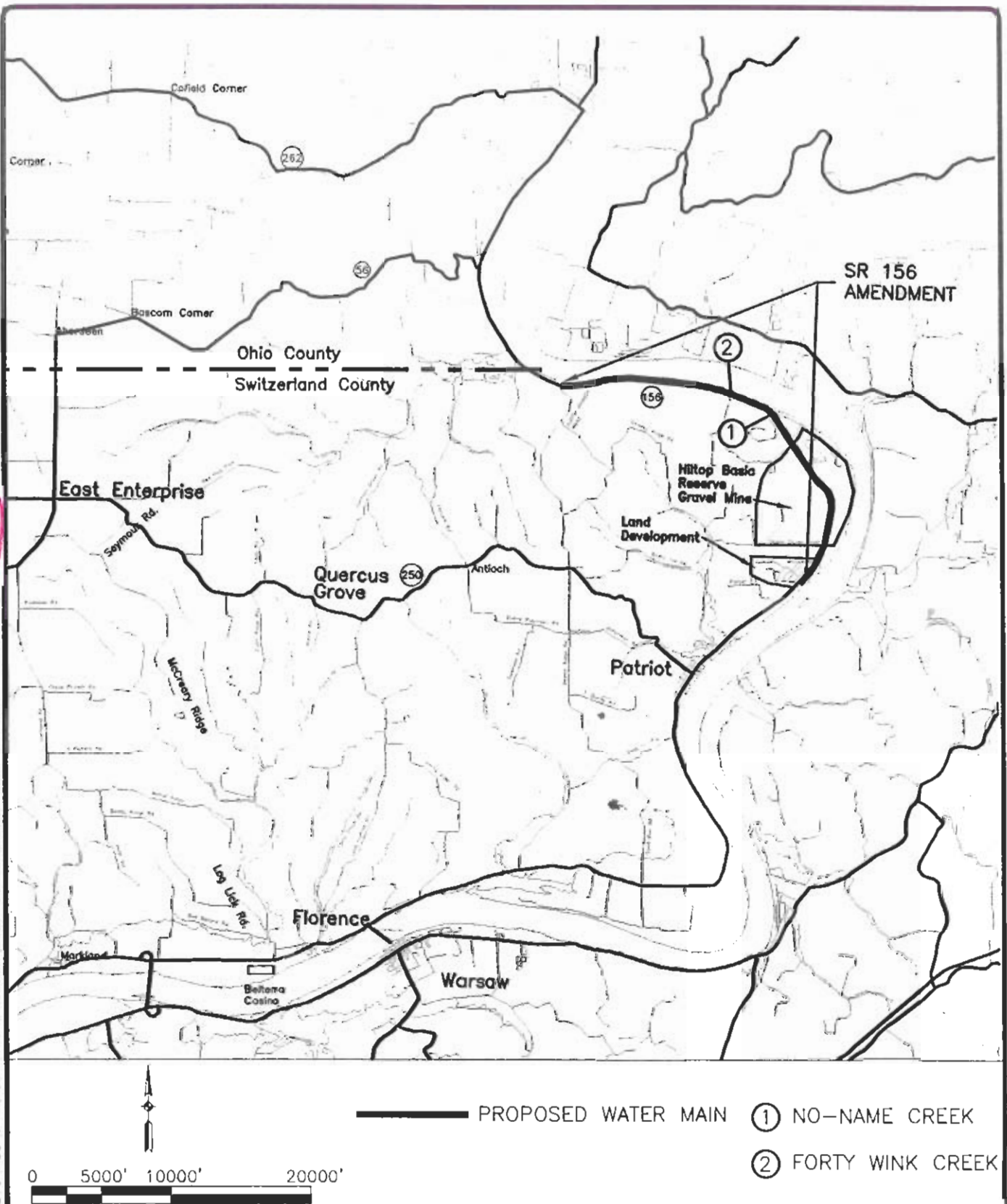
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Figure 2



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STREAM CROSSING LOCATION MAP

PATRIOT MUNICIPAL WATER UTILITY
PRELIMINARY ENGINEERING REPORT - SR 156 AMENDMENT
SWITZERLAND COUNTY, INDIANA



Figure 4

REV 10-28-07